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The Association of Maternal Smoking with Infant Mortality and Low Birth Weight in North Carolina, 1999

by

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ABSTRACT

Objectives: This study uses data from live birth and infant death certificates to measure the association of maternal smoking during pregnancy with infant mortality and low birth weight.

Methods: The 1999 composite linked birth file for North Carolina was used for the analyses. This file is created annually by the State Center for Health Statistics and includes live births for a calendar year linked individually to infant death and Medicaid records. Infant death rates and low-birth-weight percentages were computed for mothers who reported they had or had not smoked during pregnancy. Multiple logistic regression analysis was used to estimate the odds of an infant death or a low-weight birth for mothers who smoked, controlling for other risk factors for infant death and low birth weight.

Results: Mothers who smoked during pregnancy had nearly twice the risk of an infant death or low-weight birth as mothers who did not smoke. For SIDS, the risk associated with maternal smoking was more than five times as high. After controlling for a number of demographic and medical risk factors, the odds of an infant death or low-weight birth was still much higher for mothers who smoked, and these differences were statistically significant.

Conclusions: Smoking during pregnancy is likely to be somewhat underreported on birth certificates, but the main results of this study would not be affected unless the degree of underreporting differs markedly between women who did and those who did not have an adverse birth outcome. Not smoking during pregnancy and after birth would improve the health of both infants and their mothers.